

Application No.: 09/977,193
 Old Attorney's Docket No. 027557-069
 New Attorney's Docket No. 0119-134
 Page 4

Amendments to the Claims:

Please replace all prior versions, and listings of claims in the application with the following listing of claims.

Listing of claims

Claims 1-3 (canceled)

Claim 4 (currently amended): A method of adjusting timing of amplitude and phase components in an output RF signal, the method comprising:

generating amplitude and phase signals from input data;
 adjusting the generated amplitude and phase signals to produce adjusted amplitude and phase signals;
 supplying the adjusted amplitude and phase signals to a radio frequency circuit; and
 transmitting an output RF signal from the radio frequency circuit, wherein adjusting the generated amplitude and phase signals comprises:
 detecting an output RF signal to produce detected amplitude and phase signals;
 subjecting the generated phase signal to a first time delay to produce a delayed phase signal, the first time delay being such as to ~~minimise~~ minimize a difference between the delayed phase signal and the detected phase signal;
 subjecting the generated amplitude signal to a second time delay to produce a delayed amplitude signal, the second time delay being such as to ~~minimise~~ minimize the difference between the delayed amplitude signal and the detected amplitude signal; and
 adjusting the generated amplitude and phase signals in dependence upon the first and second time delays.

Claim 5 (original): A method as claimed in claim 4, wherein the adjusted amplitude and phase signals are converted to inphase and quadrature (I and Q) signals for supply to the radio frequency circuit.

Claims 6-8 (canceled)

Application No.: 09/977,193
 Old Attorney's Docket No. 027557-069
 New Attorney's Docket No. 0119-134
 Page 5

Claim 9 (currently amended): A method of adjusting timing of inphase and quadrature (I and Q) components in an output RF signal, the method comprising:

- generating inphase and quadrature (I and Q) signals from input data;
- adjusting the generated inphase and quadrature (I and Q) signals to produce adjusted inphase and quadrature (I and Q) signals;
- supplying the adjusted inphase and quadrature (I and Q) signals to a radio frequency circuit; and
- transmitting an output RF signal from the radio frequency circuit, wherein adjusting the generated inphase and quadrature (I and Q) signals comprises:
 - detecting an output RF signal to produce detected inphase and quadrature (I and Q) signals;
 - subjecting the generated inphase (I) signal to a first time delay to produce a delayed inphase (I) signal, the first time delay being such as to minimize a difference between the delayed inphase (I) signal and the detected inphase (I) signal;
 - subjecting the generated quadrature (Q) signal to a second time delay to produce a delayed quadrature (Q) signal, the second time delay being such as to minimize ~~minimise~~ the difference between the delayed quadrature (Q) signal and the detected quadrature (Q) signal;
 - and
 - adjusting the generated inphase and quadrature (I and Q) signals in dependence upon the first and second time delays.

Claim 10 (original): A method as claimed in claim 9, wherein the adjusted inphase and quadrature (I and Q) signals are converted to phase and amplitude signals for supply to the radio frequency circuit.

Claims 11-12 (canceled)

Claim 13 (currently amended): Apparatus for adjusting timing of phase and amplitude components of an RF signal, the apparatus comprising:

- an RF detector unit for detecting an RF signal and operable to produce detected phase and amplitude signals therefrom;

Application No.: 09/977,193
 Old Attorney's Docket No. 027557-069
 New Attorney's Docket No. 0119-134
 Page 6

an adjustment unit connected to receive generated phase and amplitude signals and operable to output adjusted phase and amplitude signals in dependence upon received adjustment control signals;

a delay unit connected to receive the generated phase and amplitude signals and operable to delay those signals by respective time delays to produce delayed phase and amplitude signals, the respective time delays being determined such that respective differences between detected and delayed phase and amplitude signals are minimized ~~minimised~~; and

a delay calculation unit which is operable to generate adjustment control signals in dependence upon the respective time delays and to supply the adjustment control signals in dependence upon respective time delays and to supply the adjustment control signals to the adjustment unit.

Claims 14-15 (canceled)

Claim 16 (currently amended): Apparatus for adjusting timing of inphase and quadrature (I and Q) components of an RF signal, the apparatus comprising:

an RF detector unit for detecting an RF signal and operable to produce detected inphase and quadrature (I and Q) signals therefrom;

an adjustment unit connected to receive generated inphase and quadrature (I and Q) signals and operable to output adjusted inphase and quadrature (I and Q) signals in dependence upon received adjustment control signals;

a delay unit connected to receive the generated inphase and quadrature (I and Q) signals and operable to delay those signals by respective time delays to produce delayed inphase and quadrature (I and Q) signals, the respective time delays being determined such that respective differences between detected and delayed inphase and quadrature (I and Q) signals are minimized ~~minimised~~; and

a delay calculation unit which is operable to generate adjustment control signals in dependence upon the respective time delays and to supply the adjustment control signals ~~in dependence upon respective time delays and to supply the adjustment control signals to the~~ adjustment unit.

Application No.: 09/977,193
Old Attorney's Docket No. 027557-069
New Attorney's Docket No. 0119-134
Page 7

Claims 17-18 (canceled)

Claim 19 (original): A mobile telecommunications device comprising radio frequency circuitry and apparatus as claimed in claim 13.

Claim 20 (original): A method of controlling radio frequency circuitry in a mobile telecommunications device comprising a method as claimed in claim 4.

Claim 21 (canceled)

Claim 22 (original): A method of controlling radio frequency circuitry in a mobile telecommunications device comprising a method as claimed in claim 9.

Claim 23 (canceled)

Claim 24 (original): A mobile telecommunications device comprising radio frequency circuitry and apparatus as claimed in claim 16.